

**SYSTEM AND METHOD FOR ADAPTING RF TRANSMISSIONS TO MITIGATE  
THE EFFECTS OF CERTAIN INTERFERENCES**

**ABSTRACT OF THE DISCLOSURE**

An unlicensed RF data delivery system uses interference characterization to adapt the RF transmission to accommodate the interferences. It uses at least one detection system to determine the type of interference present in an RF band. A channel per channel measurement of interference is made, usually in conjunction with a sweep of the total operating spectrum, generating a picture of the interference over the entire frequency spectrum. The system characterizes not only interference levels, but bandwidth of the interference. A profile is generated, the response to that interference profile is one of several methods, such as frequency change; changing modulation to higher or lower levels; changing the channel width; changing the code rate; changing antenna polarity; and using hub diversity. By first characterizing the type of interference, the system response is tailored to maximize the available interference free spectrum.